

Patent Claims

1. Method for treating substrates in at least one of two tanks, each of which can be filled with at least two treatment fluids, by means of the following method steps:

- a) Preparing a first treatment fluid in a treatment fluid processing unit that is common to both of the tanks, with the capacity of the processing unit being designed for one treatment tank,
- b) Charging the tank with substrates,
- c) Introducing the first treatment fluid into the tank for a predetermined period of time,
- d) Introducing the at least second treatment fluid into the tank, and,
- e) Removing the substrates from the tank,

whereby the method steps are controlled in parallel, and in a time staggered manner in the respective tanks in such a way that a period of time sufficient for the preparation of the first treatment fluid is provided between the end of the step c) in one of the tanks and the beginning of the step c) in the other of the tanks.

2. Method according to claim 1, characterized in that the first treatment fluid is discharged prior to the introduction of the second treatment fluid.

3. Method according to claim 1, characterized in that the first treatment fluid is displaced out of the tank by the introduction of the second treatment fluid.

4. Method according to one of the preceding claims, characterized in that the first treatment fluid is mixed and/or heated during the preparation from different chemicals.

5. Method according to one of the preceding claims, characterized in that the first treatment fluid, after the conclusion of the step c), is respectively returned to the treatment fluid processing unit.

6. Method according to one of the preceding claims, characterized in that the processing of the first treatment fluid, and the charging of the tank, at least partially overlap one another in terms of time.

7. Method according to one of the preceding claims, characterized by the introduction of a third treatment fluid.

8. Method according to one of the preceding claims, characterized in that the second and/or third fluid is a rinsing fluid.

9. Method according to one of the preceding claims, characterized in that the second and/or third treatment fluids are made

available by means of treatment fluid supply units that are respectively common for both tanks.

10. Method according to one of the preceding claims, characterized in that the tanks are charged and unloaded with a common handling mechanism.

11. Method according to one of the preceding claims, characterized in that for the charging and unloading of the one tank, the substrates are moved over the other tank, and in that this movement is effected only during a rinsing process in the other tank.

12. Method according to one of the preceding claims, characterized in that one of the tanks is covered during a movement of a handling mechanism thereover.

13. Method according to claim 12, characterized in that the tank is covered by means of an essentially flat lid.

14. Method according to one of the preceding claims, characterized in that the handling mechanism accesses a common introduction/delivery station.

15. Method according to one of the preceding claims, characterized in that during removal from the respective tank, the substrates are dried pursuant to the Marangoni principle.

16. Method according to claim 15, characterized in that the drying is effected pursuant to the Marangoni principle.

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17. Apparatus for treating substrates including,

- two tanks that can be filled with at least two treatment fluids,
- at least one first treatment fluid supply unit that is common for the tanks and that has at least one treatment fluid processing unit, the capacity of which is designed for one tank,
- at least one second treatment supply unit,
- a control unit for the time staggered control of parallel process steps in the respective tanks.

18. Apparatus according to claim 17, characterized by a rapid discharge valve at the base of each tank.

19. Apparatus according to one of the claims 17 or 18, characterized by an overflow on each tank.

20. Apparatus according to one of the claims 17 to 19, characterized in that the treatment fluid processing unit has a chemical mixing device and/or a heating device.

21. Apparatus according to one of the claims 17 to 20, characterized in that the first treatment fluid supply unit has a fluid circuit.

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22. Apparatus according to one of the claims 17 to 21, characterized by a device for the return of treatment fluid from the tanks to the first treatment supply unit.

23. Apparatus according to one of the claims 17 to 22, characterized by a reprocessing unit within the first treatment fluid supply unit.

24. Apparatus according to one of the claims 17 to 23, characterized by a common substrate handling mechanism for the charging and unloading of both tanks.

25. Apparatus according to one of the claims 17 to 24, characterized by a movable cover for at least one of the tanks.

26. Apparatus according to claim 25, characterized in that the cover is an essentially flat lid.

27. Apparatus according to one of the claims 17 to 26, characterized by an introduction/delivery station for making the substrates available for both tanks.


28. Apparatus according to one of the claims 17 to 27, characterized by a device for concentrating the substrates for the treatment in the two tanks.

29. Apparatus according to one of the claims, 17 to 28, characterized in that the introduction station, the device for

concentrating the substrates and/or the two tanks are disposed in a row.

~~30.~~ Apparatus according to one of the claims 17 to 29, characterized in that the two tanks are disposed on different sides of the device for the concentration of the substrates.

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